

CLAIMS

What is claimed is:

1. A method for distributing candidate motion vectors, the method comprising: dividing a picture frame (110) into a plurality of segments (120), each segment (120) comprising a plurality of pixel blocks (130); measuring local motion complexity for each segment (120); and assigning a number of candidate motion vectors to pixel blocks (130) within each segment (120) based on the measured local motion complexity.

2. The method of claim 1, wherein the step of measuring comprises: determining a sum-of-absolute differences between pixel blocks (130) of the picture frame (110a) and corresponding pixel blocks (130) of an adjacent frame (110b); and summing the measured sum-of-absolute differences associated with of pixel blocks (130) within each segment (120).

3. The method of claim 2, wherein the step of assigning comprises using a distribution function configured to assign the number of candidate vectors based on the measured local motion complexity of each segment (120).

4. The method of claim 3, wherein the distribution function is based on a maximum, minimum and average of the measured sum-of-absolute differences of the segments.

5. The method of claim 4, wherein the distribution fuction is further based on predetermined values for a maximum, minimum and average number of candidate vectors per block.

6. The method of claim 1, further comprising performing motion estimation on the pixel blocks (130) using the number of candidate vectors assigned to each pixel block (130).

7. A system for distributing candidate vectors, the system comprising: means for dividing a picture frame (110) into a plurality of segments (120), each segment (120) comprising a plurality of pixel blocks (130); means for measuring local motion complexity for each segment (120); and means assigning a number of candidate motion vectors to pixel blocks (130) within each segment (120) based on the measured local motion complexity.

8. The system of claim 7, wherein the means for measuring comprises: means for determining a sum-of-absolute differences between pixel blocks (130) of the picture frame (110a) and corresponding pixel blocks (130) of an adjacent frame (110b); and means

for summing the measured sum-of-absolute differences associated with of pixel blocks (130) within each segment (120).

9. The system of claim 8, wherein the means for assigning uses a distribution function configured to assign the number of candidate vectors based on the measured local motion complexity of each segment (12).

10. The system of claim 9, wherein the distribution function is based on a maximum, minimum and average of the measured sum-of-absolute differences of the segments.

11. The system of claim 10, wherein the distribution fuction is further based on predetermined values for a maximum, minimum and average number of candidate vectors per block.

12. The system of claim 7, further comprising means for performing motion estimation on the pixel blocks (130) using the number of candidate vectors assigned to each pixel block (130).